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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,130	11/21/2003	Eric C. Huffman	71189-1568	1129

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EXAMINER

SNIDER, THERESA T

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 08/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/707,130	Applicant(s) HUFFMAN ET AL.	
	Examiner Theresa T. Snider	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
 4a) Of the above claim(s) 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/21/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-20, drawn to cleaning robot, classified in class 15, subclass 319.
 - II. Claim 21, drawn to a method of cleaning a surface, classified in class 134, subclass 21.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the method can be practiced by hand wherein the input data is hand entered into a terminal and instructions can be printed out for an operator to follow.
3. Because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.
4. During a telephone conversation with John McGarry on 8/7/2006 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-20. Affirmation of this election must be made by applicant in replying to this Office action. Claim 21 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

6. The drawings are objected to because Figure 3 has 2-‘60’s and 2-‘62’s directed to different elements. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The disclosure is objected to because of the following informalities:

Exemplary of such:

0021, lines 1-2, '10' should be from after 'pad' in line 2 to after 'cleaner' in line 1.

Appropriate correction is required.

Claim Objections

8. Claims 2-20 are objected to because of the following informalities:

Exemplary of such:

Claims 2-20, line 1, 'An' should be replaced with 'The'.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 9 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Exemplary of such:

Claim 9, line 3, 'the base assembly' lacks proper antecedent basis.

Claim 11, line 2, 'the dust cloth' lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-2 and 8-10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nakanishi et al..

Nakanishi et al. discloses a base housing (fig. 2, #1).

Nakanishi et al. discloses a drive system mounted to the housing (fig. 2, #11).

Nakanishi et al. discloses a computer processing unit (fig. 1, #14,13).

Nakanishi et al. discloses a dust assembly (fig. 2, #12B).

Nakanishi et al. discloses a suction nozzle (fig. 2, #12A).

Nakanishi et al. discloses a recovery tank (fig. 10A, #12A-1).

Nakanishi et al. discloses a suction source (col. 3, line 27-29).

Nakanishi et al. discloses a power source (fig. 1, #27).

With respect to claim 2, Nakanishi et al. discloses a cleaning fluid delivery system (col. 3, lines 51-54).

With respect to claim 8, Nakanishi et al. discloses the input data is remote control signal (col. 4, lines 1-5).

With respect to claim 9, Nakanishi et al. discloses the input data being a program (col. 4, lines 8-10).

With respect to claim 10, Nakanishi et al. discloses the drive system including at least one wheel driven by a drive motor (col. 3, lines 11-15).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. Claims 1-2, 8-11 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirkpatrick et al. in view of Nakanishi et al..

Kirkpatrick et al. discloses a similar cleaning robot however fails to disclose a recovery system or remote control signal.

Kirkpatrick et al. discloses a base housing (fig. 1A, #20).

Kirkpatrick et al. discloses a drive system mounted to the housing (fig. 2, #38).

Kirkpatrick et al. discloses a computer processing unit (fig. 13, #130).

Kirkpatrick et al. discloses a dust assembly (fig. 17, #172).

Kirkpatrick et al. discloses a power source (fig. 8, lines 26).

Nakanishi et al. discloses a cleaning robot with a suction nozzle, recovery tank and suction source (fig. 2, #12A, fig. 10A, #12A-1 and col. 3, line 27-29). It would have been obvious to one of ordinary skill in the art to provide the recovery system of Nakanishi et al. in Kirkpatrick et al. to allow dirt to be removed from a surface rather than moved around by the dusting assembly.

With respect to claim 2, Kirkpatrick et al. discloses a cleaning fluid delivery system (col. 16, lines 3-11).

With respect to claim 8, Nakanishi et al. discloses the input data is remote control signal (col. 4, lines 1-5). It would have been obvious to one of ordinary skill in the art to provide the remote control signal of Nakanishi et al. in Kirkpatrick et al. to allow an operator to decide how the robot will clean a surface.

With respect to claim 9, Kirkpatrick et al. discloses input data being a program (col. 13, lines 17-35).

With respect to claim 10, Kirkpatrick et al. discloses the drive system including at least one wheel driven by a drive motor (col. 7, lines 59-61).

With respect to claim 11, Kirkpatrick et al. discloses the dusting assembly removably mounted to a pad (col. 16, lines 52-63).

With respect to claim 19, Kirkpatrick et al. discloses proximity sensors (col. 13, lines 53-66).

With respect to claim 20, Kirkpatrick et al. discloses the use of the signal from the proximity sensor to control the drive system (col. 13, line 64-65).

17. Claims 3 and 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirkpatrick et al. in view of Nakanishi et al. as applied to claim 2 above, and further in view of Martin et al..

Kirkpatrick et al. in view of Nakanishi et al. discloses a similar cleaning robot however fails to disclose an agitator.

Martin et al. discloses a cleaning robot with a dusting assembly and agitator (fig. 4, #32).

It would have been obvious to one of ordinary skill in the art to provide the agitator of Martin et al. in Kirkpatrick et al. in view of Nakanishi et al. to ensure that all debris is effectively removed from a surface.

18. Claims 4-7 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirkpatrick et al. in view of Nakanishi et al. and Martin et al. as applied to claim 3 above, and further in view of Kasper et al.

Kirkpatrick et al. in view of Nakanishi et al. and Martin et al. discloses a similar cleaning robot however fails to disclose floor condition sensors.

Kirkpatrick et al. discloses various sensors mounted on the housing however fails to disclose the type of sensors (col. 4, lines 15-16). Nakanishi et al. discloses various sensors mounted on the housing however fails to disclose the type of sensors (col. 4, lines 15-16). Kasper et al. discloses the use of floor condition sensors in a home cleaning device (abstract). It would have been obvious to one of ordinary skill in the art to provide the floor condition sensor of Kasper et al. in Kirkpatrick et al. in view of Nakanishi et al. and Martin et al. to allow for the most effective cleaning of the desired surface.

With respect to claims 5 and 14, Kasper et al. discloses the use of the signal from the condition sensor to control one of the suction source or drive system (claims 1-4). It would have been obvious to one of ordinary skill in the art to allow for the same control in Kirkpatrick et al. in view of Nakanishi et al. and Martin et al. as in Kasper et al. to ensure that all surfaces are effectively cleaned by the cleaning robot.

With respect to claims 6 and 15, Kirkpatrick et al. discloses proximity sensors (col. 13, lines 53-66).

With respect to claims 7 and 16, Kirkpatrick et al. discloses the use of the signal from the proximity sensor to control the drive system (col. 13, line 64-65).

19. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirkpatrick et al. in view of Nakanishi et al. as applied to claim 1 above, and further in view of Kasper et al.

Kirkpatrick et al. in view of Nakanishi et al. discloses a similar cleaning robot however fails to disclose floor condition sensors.

Kirkpatrick et al. discloses various sensors mounted on the housing however fails to disclose the type of sensors (col. 4, lines 15-16). Nakanishi et al. discloses various sensors mounted on the housing however fails to disclose the type of sensors (col. 4, lines 15-16). Kasper et al. discloses the use of floor condition sensors in a home cleaning device (abstract). It would have been obvious to one of ordinary skill in the art to provide the floor condition sensor of Kasper et al. in Kirkpatrick et al. in view of Nakanishi et al. to allow for the most effective cleaning of the desired surface.

With respect to claim 18, Kasper et al. discloses the use of the signal from the condition sensor to control one of the suction source or drive system (claims 1-4). It would have been obvious to one of ordinary skill in the art to allow for the same control in Kirkpatrick et al. in view of Nakanishi et al. as in Kasper et al. to ensure that the cleaning robot effectively cleans all surfaces.

20. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi et al. as applied to claim 1 above, and further in view of Kasper et al.

Nakanishi et al. discloses a similar cleaning robot however fails to disclose floor condition sensors.

Nakanishi et al. discloses various sensors mounted on the housing however fails to disclose the type of sensors (col. 4, lines 15-16). Kasper et al. discloses the use of floor condition sensors in a home cleaning device (abstract). It would have been obvious to

one of ordinary skill in the art to provide the floor condition sensor of Kasper et al. in Nakanishi et al. to allow for the most effective cleaning of the desired surface.

With respect to claim 18, Kasper et al. discloses the use of the signal from the condition sensor to control one of the suction source or drive system (claims 1-4). It would have been obvious to one of ordinary skill in the art to allow for the same control in Nakanishi et al. as in Kasper et al. to ensure that the cleaning robot effectively cleans all surfaces.

21. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi et al. as applied to claim 1 above, and further in view of Kobayashi et al..

Nakanishi et al. discloses a similar cleaning robot however fails to disclose proximity condition sensors.

Nakanishi et al. discloses various sensors mounted on the housing however fails to disclose the type of sensors (col. 4, lines 15-16). Kobayashi et al. discloses the use of proximity sensors in a cleaning robot (col. 1, lines 22-29). It would have been obvious to one of ordinary skill in the art to provide the proximity condition sensor of Kobayashi et al. in Nakanishi et al. to ensure that the robot is not bumping into objects, including the walls of a room.

With respect to claim 20, it would have been obvious to one of ordinary skill in the art to allow for use of the proximity signal of Kobayashi et al. in Nakanishi et al. to ensure that the robot travels within a room without continually bumping into obstacles or walls.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chen et al. discloses a floor cleaning robot with a brush as a dusting assembly. Wallach et al. discloses a floor cleaning robot with a fluid delivery system. Colens discloses a floor cleaning robot. Aasen and Wosewick et al. disclose a floor cleaning robot with a dust cloth and suction source.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T. Snider whose telephone number is (571) 272-1277. The examiner can normally be reached on Monday-Friday (5:30am-2:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Theresa T. Snider

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Shervin S. Snider

Primary Examiner
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